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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,979	05/23/2001	Gayle W. Miller	98-197/1D	2179

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/13/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE COPY

Office Action Summary

Application No.

09/863,979

Applicant(s)

MILLER ET AL.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 5) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Priority

1. This application discloses and claims only subject matter disclosed in prior Application No. 09/302,832, filed April 30, 1999, and names an inventor or inventors named in the prior application. Accordingly, this application may constitute a continuation or division. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 26-29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Batchelder, US Patent 5,472,502.

Batchelder teaches a housing 1102A, 1102B that opens to allow a substrate to pass into the chamber; a rotating chuck 306-11 for holding and spinning the substrate; a movable dispersing head 310A to deposit a precursor on the substrate; and a filter unit (showerhead) 312C. The showerhead is connected to a catalyst source 316, and contains a dispersion head (back and sides of showerhead 312C), and a filter (showerhead plate) that together uniformly distributes the catalyst. (Figures 9, 11A and 11B, and column 9 line 17 through column 10 line 35)

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4. Claims 26-29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mandal et al, US Patent 5,670,210.

Mandal et al teaches a housing 14 that includes an opening to allow a substrate to pass into the chamber; a rotating chuck 12 for holding and spinning the substrate; a dispersing head 54 to deposit a precursor on the substrate; and a filter unit (showerhead) 20. The showerhead is connected to a catalyst source 34, and contains a dispersion head (back and sides of showerhead 20), and a filter (showerhead plate) that together uniformly distributes the catalyst. (Figures 1 and 2, and throughout the specification)

5. The examiner notes that the specific substance supplied to an apparatus, and the specific substrate processed in an apparatus is an intended use of the apparatus. Both Batchelder and Mandal et al are inherently capable of delivering any substance (solvent or catalyst) to the showerhead, which evenly distributes the substance over the substrate. Likewise, both apparatus can be used to process substrates for an integrated circuit or a chemical sensor (or any other device).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandal et al or Batchelder in view of Santini, US Patent 4,696,729.

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Mandal et al and Batchelder were discussed above.

Mandal et al and Batchelder both do not teach that the showerhead is a mesh unit made out of polytetrafluoroethylene materials.

Santini teaches a showerhead that is made out of a perforated plate and an equivalent embodiment in which the showerhead is a polytetrafluoroethylene screen (mesh).

The motivation for using the mesh showerhead of Santini in the apparatus of Mandal et al or Batchelder is to supply a specific type of showerhead as required by Mandal et al and Batchelder but only generically described by Mandal et al and Batchelder.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the showerhead of Santini in the apparatus of Mandal et al or Batchelder.

Response to Arguments

8. Applicant's arguments filed December 31, 2002 have been fully considered but they are not persuasive.

In regard to the argument that Mandal et al and Batchelder do not teach a dispense head, the examiner disagrees. As was discussed above Mandal et al and Batchelder both teach a dispense head. Furthermore, the dispense head is only a chamber that receives vapors from a vapor source and in turn distributes the gas to the mesh. All showerheads have a filter plate (i.e. a perforated plate or a mesh screen) and a dispense head that distributes the fluids to the filter plate. There is no teaching in the

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specification or drawing to show any special detail that might distinguish the dispense head of the claimed invention with the dispense head as inherent and required in the entire showerhead prior art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art teaches the technological background of the invention. The cited art contains patents that could be used to reject the claims under 35 USC § 102 or 103. These rejections have not been made because they do not provide any additional or different teachings, and if they were applied, would have resulted in an undue multiplication of references. (See MPEP 707.07(g))

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (703) 308-1796. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
March 8, 2003